RACE dynamics
Performance Through Innovation

PowerTRONIC™

PowerTRONIC™ is a standalone gasoline plug-in replacement Electronic Control Unit for the Royal Enfield Classic 500* and Yamaha R15*. This ECU is completely programmable, and comes pre-mapped with read-locked optimal calibration for stock and mildly modified vehicles that increases power and efficiency, and enhance drivability, feel and functionality. Advanced users can request an unlocked ECU and tuning software that permits complete access to ECU parameters. **This ECU has been conceptualized, designed, developed, manufactured and tuned in India.**

The ECU comes in three variants –

PowerTRONIC™-RS – For street applications. Read-Locked optimal maps.
PowerTRONIC™-RR – For advanced users, with full read/write access. The tuning software is available for download on our website.
PowerTRONIC™-RR2 – RR version + dedicated on-board altitude sensor for real-time correction, calibrated from 0 to 18,000 feet above mean sea level.

PowerTRONIC™ Features

- Plug-in ECU, no wires tampered/cut
- Automotive grade product
- Increase power
- Increase mileage
- Increase max RPM limit
- ECU designed to support up to 20,000 RPM
- Robust construction, environmentally sealed

- Extensively tested and proven on race tracks
- Launch control, flat-shift and shift-light
- Future ready – downloadable maps for different specifications and combinations (example: map 1 for free flow air-filter, map 2 for different exhaust, map 3 for performance camshaft, etc) available soon.
- Made with pride in India

PowerTRONIC™ specifications

Outputs

1. Injector - high impedance
2. Ignition - direct coil drive
3. Idle – Fast idle
4. Fuel Pump
5. Radiator fan
6. Overheat indicator Lamp
7. Malfunction Indicator Lamp
8. Launch control
9. Shift light
10. Power supply for sensors, short-circuit protected (+5v)
    (Feature – 3,5,6,8,9 are not available on the standard Enfield 500)

Inputs

1. Engine position and speed
2. Throttle position
3. Manifold pressure
4. Engine temperature
5. Air temperature
6. Battery voltage
7. Altitude
8. Tilt
9. **On-board altitude sensor (0 to 18000 feet above mean sea level)-PowerTRONIC-RR2**

Additional features (optional):

1. Launch control
2. Shift-light (multiplexed)

Operating voltage : 9.5V to 20V

Operating temperature: -20 deg C to +85 deg C

Protection: Short circuit protected. Environmentally sealed

Warranty: 2 years

Notes-

- The PowerTRONIC™ ECU may have room for improvement. We at Race Dynamics encourage our customers to convey feedback on feel, calibrations, mileage, power, etc. to enable us to deliver better products.
- PowerTRONIC™ is a product from **Race Dynamics India Pvt. Ltd. (www.racedynamics.in)**

For Royal Enfield Classic 500*

- The ECU is configured to activate "**Shift-Light**" mode by blinking the 'Malfunction indicator Lamp-LED ' at a pre-set RPM limit. Please do not confuse this with any other indications. However, in the event of a malfunction indication, the "Shift light" mode is disabled and the malfunction indicator will take priority.
- The engine rev limit is increased by 500RPM more than original
- The PowerTRONIC™-E has a 12v output for tachometer.

For Yamaha R15*

- The ECU is configured to activate "**Shift-Light**" mode by blinking the 'Malfunction indicator Lamp-LED ' and 'Overheat LED' together when RPM exceeds 10600 RPM.

Please do not confuse this with any other indications. However, in the event of a malfunction indication or overheat condition, the “Shift light” mode is disabled and the malfunction indicator and/or overheat indicator will take priority.

- The engine rev limit is increased to 12300 RPM
- Radiator fan is turned on at engine temperature of approximately 94 deg C., overheat warning turns on at approx. 104 deg C.
- The original ECU indicates an RPM more than actual RPM (on tachometer, approx. +5%). With PowerTRONIC™ the tachometer calibration is accurate.

*Registered trademark of owners

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